00400 00000			Schedule of Charges	Hourly Rate or Charge	Hours or Unit Estimate	Subtotal
1.	Ongoing	Project Management	Principal	\$140	50	\$7,000
		- Coordinate scope and schedule of project activities with WDEQ and subcontractors	Project Manager	\$105	100	\$10,500
		- Provide regular project updates to WDEQ via e-mail and/or telephone conferences	Project Engineer/Geologist	\$80	150	\$12,000
			Project Support	\$40	40	\$1,600
		WDEQ COSTING ASSUMPTION:	Labor			\$31,100
		WUED COSTING ASSUMETION: - Project management cost will total >10% of total project cost	Labor			\$31,100
		- Project management cost win total ≥10% on total project cost	No expenses expected with P	M Task		\$0
			Expenses			\$0
			Other		0	\$0
			Subcontractors			\$0
3	4 months	Develop HASP, SAP, and QAPP	Activity 1. Subtotal Principal	\$140	12	\$31,100 \$1,680
۷.	4 11011415	Development of project specific Health and Safety Plan to incorporate groundwater sampling and drilling activities	Project Manager	\$105	25	\$2,625
		- Development of a Sampling and Analysis Plan	Project Engineer/Geologist	\$80	80	\$6,400
		- Development of a Quality Assurance Project Plan	Drafting	\$60	10	\$600
			HSE Department	\$80	20	\$1,600
			Project Support	\$40	8	\$320
			Labor			\$13,225
		Assumptions: - WDEQ will review documents and documents will be revised per WDEQ comments - Assumes that there will be two rounds of review and comments by WDEQ before finalizing				
			Miscellaneous	Cost	0	\$100
		WDEQ COSTING ASSUMPTION: - None	Expenses			\$100
			Other		0	\$0
			Subcontractors			\$0
			Activity 2. Subtotal			\$13,325

		Schedule of Charges	Hourly Rate or Charge	Hours or Unit Estimate	Subtotal
3. 2 months	Property Owner Access Agreements	Principal	\$140	4	\$560
	- Prepare access agreements with property owners to allow access to property for contractor, subcontractors, and WDEQ personnel:	Project Manager	\$105	6	\$630
	Sampling of domestic water wells and monitoring wells	Project Engineer/Geologist	\$80	10	\$800
	2) Downhole Camera work on drinking water wells	Project Support	\$40	4	\$160
	3) Installation of monitoring wells				
	Assumptions: - Property owner access agreements can be requested at concurrently with development of HASP, SAP, and QAPP	Labor			\$2,150
	WDEQ COSTING ASSUMPTION:	Miscellaneous  Expenses	Cost	0	\$100 \$100
	- Assumes that selected contractor will pursue property access agreements, WDEQ may want to do property access agreements prior to/during RFP process to identify any potential access issues	Expenses			\$100
	prior to going KFF process to identify any potential access issues	Other		0	\$0
		Subcontractors			\$0
		Activity 3. Subtotal			\$2,250
4. 1 week	Downhole Camera of Drinking Water Wells	Principal	\$140	2	\$280
	- Decontaminate the downhole camera prior to work at each well - Complete a methane gas survey of the well headspace prior to doing camera work	Project Manager Field Technician	\$105 \$80	6 80	\$630 \$6,400
	Record the results of the camera, and provide results to the WDEQ  - Collect field notes of procedures used and any issues noted  - Informal survey of property, and within 1000 ft of the property to determine potential onsite sources of 'impacts' to the drinking water wells.	reta recimician	400	30	\$0,400
	Assumptions:.  - Downhole camera will be able to fit within the drinking water well without removing the well owner's water supply pump				
	- Does not include potential for metrhane mitigation prior to doing the camera work - Does not assume that an intrinsically safe camera will be able to be used - Property access agreements will be in place	Labor			\$7,310
	- Water well pumps will be turned off during the camera work	Equipment		1	\$2,420
	- Assumes this will be completed prior to starting the drinking water well sampling program	Travel	Cost	1 7	\$1,330
	- Assumes camera can be run based on battery power from field vehicle, no generator will be rented  - Assumes one field technician	Per Diem Miscellaneous	\$46 Cost	1	\$322 \$250
		Expenses			\$4,322
	WDEQ COSTING ASSUMPTION:	Other		\$0	\$0
	- None	Subcontractors			\$0
		Activity 4. Subtotal			\$11,632

\$4.5 5 5 5 Februard 4 5 5 5 5 5		Schedule of Charges	Hourly Rate or Charge	Hours or Unit Estimate	Subtotal
5a. 12 months	Baseline Sampling of Drinking Water Wells (15) per Sampling Event	Principal	\$140	2	\$280
	- Coordinate with property owners and WDEQ regarding sample schedule	Project Manager	\$105	4	\$420
	- Coordinate with lab and equipment supplier	Project Engineer/Geologist	\$80	10	\$800
	- Collect groundwater quality readings while purging water through the property owner lines (Temp, pH, ORP, SpC, TDS, Turbidity, Salinity)	Field Technician	\$80	140	\$11,200
	- Collect groundwater samples after 3 consecutive in-limit readings	QAQC Specialist	\$90	20	\$1,800
	- Collect groundwater samples from 15 domestic wells for VOCs extended list, TPH-DRO, TPH-GRO, Lead, Methane Headspace, TPH-DRO silica cleanup - Collect OACC parameters: 1 field duplicate, 1 MS/MSDS set (2 samples), 1 field blank, 2 equipment blanks) - Collect 1 trip blank for analysis of VOCs per cooler containing VOC samples, estimated 5 coolers - Perform QAQC review of analytical data.				
	- Perform GAGO review of analysical data	Labor			\$14,500
		Equipment		0	\$0
	Assumptions:	Travel	Cost	2	\$2.030
	- Assumes that well owner pumps will be operational for collection of groundwater samples from a tap closest to the well	Per Diem	\$46	14	\$644
	- Samples will be collected prior to any water treatment systems the property owner has installed  - Samples will be shipped daily to the analytical laboratory	Miscellaneous	Cost	1	\$1,000
	- Assumes two field technicians, once technician may be able to be sent due to type of sampling	Expenses			\$3,674
	WDEQ COSTING ASSUMPTION: - Assumption is per sampling event, suggested minimum of 2 events prior to monitoring well installation	Analytical Laboratory		1	\$17,690
		Subcontractors			\$17,690
		Activity 5a. Subtotal			\$35,864
5b. 3 months	Report Results for Baseline Sampling of Drinking Water Wells for 2 Sampling Events	Principal	\$105	8	\$840
	- Draft letter report detailing procedures, deviations, and results of the DWW baseline sampling, monitoring well installation, and the DWW and MW sampling	Project Manager	\$80	10	\$800
	- Prepare figures and field photographs to document activities	Project Engineer/Geologist	\$80 \$60	40	\$3,200
	- Include lab reports and QAQC reports - Tabulate data	Drafting Project Support	\$60 \$40	24 8	\$1,440 \$320
	- Include field logs, forms, and field notes in report	Project Support	<b>\$40</b>	٥	\$320
		Labor			\$6,600
		Caulanaaa		0	20
	Assumptions:	Equipment Travel	Cost	0	\$0 \$0
	ASSUMPTIONS: Assumes that one review through WDEQ will be sufficient to finalize reports	Per Diem	\$46	0	\$0 \$0
	- Assumes that one review through Wide Countries to threate reports	Miscellaneous	Cost	1	\$100
		Expenses	0031		\$100
		Expenses			\$100
	WDEQ COSTING ASSUMPTION: - Assumes that one (1) letter report will include data from two (2) sampling events	Analytical Laboratory		1	\$0
	- resources was one process report and moves state from (4) statistics	Subcontractors			\$0
		Activity 5b. Subtotal			\$6,700

		Schedule of Charges	Hourly Rate or Charge	Hours or Unit Estimate	Subtotal
6a. 2 months	Drilling Area of Interest #11 (Interest #12)  - Request utility locate prior to drilling activities - Oversee drilling activities, including lithlocing logging of soils and screening soils with a PID - Include photo documentation from drilling activities - Oversee installation of 3 sets of 4 monitoring wells to the following depths: 50 ft bgs, 200 ft bgs, 500 ft bgs, and 750 ft bgs - Oversee development of monitoring wells	Principal Project Manager Project Engineer/Geologist Field Technician	\$140 \$105 \$80 \$80	4 8 20 200	\$560 \$840 \$1,600 \$16,000
	Assumptions: - Samples for soil or groundwater will not be collected for laboratory analysis - Assumes the driller mobilization charge will be included with this ACI, only 1 mobilization charge is assumed - Cost does not include a blow out preventor during drilling activities	<u>Labor</u> Equipment Travel	Cost	1	\$19,000 \$1,820 \$3,230
	- Costs assume 1 field technician for drilling oversight due to lack of sampling - Assumes separate monitoring wells will be installed - Assumes monitoring wells will be installed using minimum 2-inch stainless steel casing and screen (deeper wells will be larger diameter)	Per Diem Miscellaneous Expenses	\$46 Cost	17 1	\$782 \$300 \$6,132
	WDEQ COSTING ASSUMPTION: - IDIV disposal costs have not been included in this task	Driller Costs Subcontractors		1	\$1,029,500 \$1,029,500
6b.	Drilling Area of Interest #2 <mark>1018-10</mark>	Activity 6a. Subtotal Principal	\$140	2	\$1,054,632 \$280
	Request utility locate prior to drilling activities  Oversee drilling activities, including lithologic logging of soils and screening soils with a PID  Include photo documentation from drilling activities  Oversee installation of 2 sets of 3 monitoring wells to the following depths: 50 ft bgs, 200 ft bgs, 300 ft bgs  Oversee development of monitoring wells	Project Manager Project Engineer/Geologist Field Technician	\$105 \$80 \$80	2 6 58	\$210 \$480 \$4,640
	Assumptions: - Samples for soil or groundwater will not be collected for laboratory analysis	Labor			\$5.610
	- Cost does not include a blow out preventor during activities - Costs assume 1 field technician for drilling oversight due to lack of sampling - Assumes separate monitoring wells will be installed - Assumes monitoring wells will be installed using minimum 2-inch stainless steel casing and screen (deeper wells will be larger diameter)	Equipment Travel Per Diem Miscellaneous	Cost \$46 Cost	1 6 0	\$935 \$1,140 \$276 \$0
	WDEQ COSTING ASSUMPTION: - IDW disposal costs have not been included - Driller mobilization costs have not been included - Assumes that all drilling activities will be conducted during one mobilization	Expenses  Driller Costs		1	\$2,351 \$253,500
	- Assumes that an uninity activities had be conducted during the intunization	Subcontractors  Activity 6b. Subtotal			\$253,500 \$261,461
		According vo. oubtotal			<b>\$201,401</b>

Timeline	÷¢¢±±0000000000000000000000000000000000	Schedule of Charges	Hourly Rate or Charge	Hours or Unit Estimate	Subtotal
6c.	Drilling Area of interest #3[0]6 protect   10   10   10   10   10   10   10   1	Principal Project Manager	\$140 \$105	2	\$280 \$210
	- Neglect duty rocke plan to onling activities, including lithologic logging of soils and screening soils with a PID	Project Manager  Project Engineer/Geologist	\$80	4	\$320
	- Include photo documentation from drilling activities	Field Technician	\$80	46	\$3,680
	- Oversee installation of 1 sets of 3 monitoring wells to the following depths: 50 ft bgs, 260 ft bgs, 500 ft bgs				
	- Oversee development of monitoring wells				
	Assumptions: - Samples for soil or groundwater will not be collected for laboratory analysis	Labor			\$4,490
	- Samples for soil of glodinowater will not be collected for laboratory analysis - Cost does not include a blow out preventor during drifting activities	Equipment		1	\$935
	- Costs assume 1 field technician for drilling oversight due to lack of sampling	Travel	Cost	1	\$570
	- Assumes separate monitoring wells will be installed	Per Diem	\$46	3	\$138
	- Assumes monitoring wells will be installed using minimum 2-inch stainless steel casing and screen (deeper wells will be larger diameter)	Miscellaneous	Cost	0	\$0
	WDEQ COSTING ASSUMPTION: - IDW disposal costs have not been included	Expenses			\$1,643
	- Driller mobilization costs have not been included  - Assumes that all drilling activities will be conducted during one mobilization	Driller Costs		1	\$185,250
		Subcontractors			\$185,250
		Activity 6c. Subtotal			\$191,383
6d.	Drilling Area of Interest #4 to 1975	Principal	\$140 \$105	2	\$280 \$210
	- Request utity locate prior to drilling activities - Oversee drilling activities including ithologic logging of soils and screening soils with a PID	Project Manager Project Engineer/Geologist	\$80	2	\$210 \$320
	- Oversee writing activates, including industrying to solis and screening solis wait a Pio - Include prior documentation from drilling activities	Field Technician	\$80	46	\$3,680
	- Oversee installation of 1 sets of 4 monitoring wells to the following depths: 50 ft bgs, 100 ft bgs, 200 ft bgs, 300 ft bgs - Oversee development of monitoring wells		•••		*****
	Assumptions: - Samples for soil or groundwater will not be collected for laboratory analysis	Labor			\$4,490
	- Cost does not include a blow out preventor during drilling activities				
	- Costs assume 1 field technician for drilling oversight due to lack of sampling	Equipment		1	\$935
	-Assumes separate monitoring wells will be installed	Travel Per Diem	Cost \$46	1 3	\$570 \$138
	-Assumes monitoring wells will be installed using minimum 2-inch stainless steel casing and screen (deeper wells will be larger diameter)	Miscellaneous	046 Cost	o n	\$1.38
	WDEQ COSTING ASSUMPTION:	Misceraireous	0031	Ü	
	- IDW disposal costs have not been included	Expenses			\$1,643
	- Driller mobilization costs have not been included - Assumes that all drilling activities will be conducted during one mobilization	Driller Costs		1	\$150,250
		Subcontractors			\$150,250
		Activity 6d. Subtotal			\$156,383

		Schedule of Charges	Hourly Rate or Charge	Hours or Unit Estimate	Subtotal
6e. Drilling Area of In		Principal	\$140	2	\$280
		Project Manager Project Engineer/Geologist	\$105 \$80	2 4	\$210 \$320
		Field Technician	\$80	118	\$9.440
- Oversee installati	on of 2 sets of 4 monitoring wells to the following depths: 50 ft bgs, 100 ft bgs, 450 ft bgs, 650 ft bgs				*****
- Oversee developr	ment of monitoring wells				
Assumptions: - Samples for soil of	or groundwater will not be collected for laboratory analysis	Labor			\$10,250
	lude a blow out preventor during drilling activities				
		Equipment		1	\$960
		Travel Per Diem	Cost \$46	1 9	\$1,710 \$414
- Assumes monitor		Miscellaneous	Cost	0	\$0
WDEQ COSTING - IDW disposal cos	ASSUMPTION:	Expenses	Cust	v	\$3.084
	n costs have not been included				
- Assumes that all	drilling activities will be conducted during one mobilization	Driller Costs		1	\$570,500
		Subcontractors			\$570,500
					- 1
		Activity 6e. Subtotal			\$583,834
6f. Drilling Area of In		Principal	\$140	2	\$280
		Project Manager Project Engineer/Geologist	\$105 \$80	2	\$210 \$320
		Field Technician	\$80	46	\$3,680
- Oversee installati	on of 1 sets of 5 monitoring wells to the following depths: 30 ft bgs, 100 ft bgs, 675 ft bgs nent of monitoring wells	red recimoun	****	40	40,000
Assumptions:		Labor			\$4,490
- Samples for soil of	or groundwater will not be collected for laboratory analysis				
		Equipment		1	\$935
		Travel Per Diem	Cost \$46	1 3	\$570 \$138
		Miscellaneous	Cost	n	\$0
WDEQ COSTING		Expenses		•	\$1.643
	ts have not been included				ψ1,0→0
	n costs have not been included drilling activities will be conducted during one mobilization	Driller Costs		1	\$184,125
		Subcontractors			\$184,125
		Activity 6f. Subtotal			\$190,258

Estmated Timeline	÷ s s 2 5 3 6 3 6 4 5 6 6 6 6 5 6 6 6 6 6 6 6 6 6 6 6 6		lourly Rate or Charge	Hours or Unit Estimate	Subtotal
7. None	Investigation Derived Waste Disposal Costs - Containerize and dispose of IDW generated waste from monitoring well drilling, development and sampling activities		_		
	Assumptions:	Disposal Costs		1	\$60,000
	WDEQ COSTING ASSUMPTION: - Cost estimate is a placeholder. Final value will be highly dependent on volumes of estimated waste generated.	Subcontractors			\$60,000
	- oost estimate is a placeholder. That have find beinging dependent on votalities of estimated waste generated.	Activity 7. Subtotal			\$60,000
8. 12 months	Sampling of Drinking Water Wells (15) and Monitoring Wells (36) and EPA MW01 per Sampling Event  - Coordinate with property owners and WDEQ regarding sample schedule  - Coordinate with ab and equipment supplier  - Collect groundwater quality readings with purging water through the property owner lines (Temp, ph, ORP, SpC, TDS, Turbidity, Salinity)  - Collect groundwater samples after 3 consecutive in-limit readings  - Collect groundwater samples into pre-preserved, laboratory provided bottles  - Decontaminate pump between each monitoring well location, dedicate tubing to each monitoring well  - Collect groundwater samples 32 wells for VOCs extended list, SVOCs, TPH-DRO, TPH-GRO, Lead, Methane Headspace, TPH-DRO silica cleanup	Principal Project Manager Project Enginee/Geologist Field Technician QAQC Specialist	\$140 \$105 \$80 \$80 \$90	2 4 10 428 40	\$280 \$420 \$800 \$34,240 \$3,600
	- Collect QAQC parameters: 2 field duplicate, 2 MS/MSDS set (4 samples), 2 field blank, 4 equipment blanks) - Collect 1 trip blank for analysis of VOCs per cooler containing VOC samples, estimated 17 coolers - Perform QAQC review of analytical data	Labor			\$39,340
	Assumptions:  - Assumes that well owner pumps will be operational for collection of groundwater samples from a tap closest to the well - Samples will be collected prior to any water treatment systems the property owner has installed - Samples will be shipped daily to the analytical laboratory - Assumes two field technicians	Equipment Travel Per Diem Miscellaneous	Cost \$46 Cost	1 2 38 1	\$2,665 \$5,330 \$1,748 \$2,000
	Country to the common of the common of the country	Expenses			\$11,743
	WDEQ COSTING ASSUMPTION:  - Assumption is per sampling event, suggested minimum of 2 events prior to reporting on results  - Assumes that all parameters will have to be sampled	Analytical Laboratory		1	\$55,400
		Subcontractors			\$55,400
		Activity 8, Subtotal			\$106,483

0000 0000 0000	distributed distributed in		Schedule of Charges	Hourly Rate or Charge	Hours or Unit Estimate	Subtotal
9.	6 months	Report on Investigation  - Draft report detailing procedures, deviations, and results of the DWW baseline sampling, monitoring well installation, and the DWW and MW sampling - Prepare fluences and field photographs to document activities - Include lab reports and CACC reports - Tabulate data - Prepare well logs and lithologic diagrams - Include field logs, forms, and field notes in report	Principal Project Manager Project Engineer/Geologist Field Technician Drafting Project Support	\$140 \$105 \$80 \$80 \$60 \$40	24 50 200 100 60 20	\$3,360 \$5,250 \$16,000 \$8,000 \$3,600 \$800
			Labor			\$37,010
		Assumptions: - Assumes that one review through WDEQ will be sufficient to finalize reports	Equipment Travel Per Diem Miscellaneous	Cost \$46 Cost	0 0 0 1	\$0 \$0 \$0 \$100
			Expenses			\$100
		WDEQ COSTING ASSUMPTION: - Assumes that no interim reports will be prepared	Other		1	\$0
			Subcontractors			\$0
40	4	Conduct Hydrogeophysical Testing on Deep Monitoring wells and geophysical (Optional)	Activity 9. Subtotal			\$37,110
10.	4 months	Conduct Hydrogeophysical testing on Deep Monitoring wells and geophysical (optional) Hydrogeophysical testing company to be hired to conduct survey of the deepest monitoring well boring installed at each well set A total of 10 wells will be tested				
			Hydogeophysical Testing		10	\$130,000
			Subcontractors			\$130,000
			Activity Subtotal			\$130,000
11.	Concurrent	Gas Mudlogging Gas mudlogging during drilling activities to determine gas 'shows'		•		
		WDEQ COSING ASSUMPTION:	Gas Mudlogging		1	\$100,000
		- May be able to limit mudlogging to deeper wells as a cost control measure	Subcontractors			\$100,000
			Activity Subtotal			\$100,000

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Timeline	ctivity Charges or Charge Subto

	Estimated Time		Task Total	Total sets of Task	Cost Estimate Total
Task 1	Ongoing	Project Management	\$31,100	1	\$31,100
Task 2	4 months	Develop HASP, SAP, and QAPP	\$13,325	1	\$13,325
Task 3	2 months	Property Owner Access Agreements	\$2,250	1	\$2,250
Task 4	1 week	Downhole Camera of Drinking Water Wells	\$11,632	1	\$11,632
Task 5a	12 months	Baseline Sampling of Drinking Water Wells (15) per Sampling Event	\$35,864	2	\$71,728
Task 5b	3 months	Report Results for Baseline Sampling of Drinking Water Wells for 2 Sampling Events	\$6,700	1	\$6,700
Task 6a	2 months	Drilling Area of Interest #1 10(6) privacy [Landowner name]	\$1,054,632	1	\$1,054,632
Task 6b	0	Drilling Area of Interest #2	\$261,461	1	\$261,461
Task 6c	0	Drilling Area of Interest #3 p(s) privacy [landowner name]	\$191,383	1	\$191,383
Task 6d	0	Drilling Area of Interest #4[b](a) grivacy [Landowner name]	\$156,383	1	\$156,383
Task 6e	0	Drilling Area of Interest D(6) priva	\$583,834	1	\$583,834
Task 6f	0	Drilling Area of interest ib(6) grivae	\$190,258	1	\$190,258
Task 7	None	Investigation Derived Waste Disposal Costs	\$60,000	1	\$60,000
Task 8	12 months	Sampling of Drinking Water Wells (15) and Monitoring Wells (36) and EPA MW01 per Sampling Event	\$106,483	2	\$212,966
Task 9	6 months	Report on Investigation	\$37,110	1	\$37,110
Task 10	4 months	Conduct Hydrogeophysical Testing on Deep Monitoring wells and geophysical (Optional)	\$130,000	1	\$130,000
Task 11	Concurrent	Gas Mudlogging	\$100,000	1	\$100,000